

**REMARKS**

Applicant respectfully requests reconsideration and allowance of the subject application. Applicant's amendments and remarks after Final are appropriate under 37 C.F.R. §1.116 because they address the Office's remarks in the Final Action, and thus could not have been presented earlier. In addition, the amendments and remarks should be entered to place the case in better form for appeal.

Claims 1-15 and 22-32 are pending, of which claims 1, 6, 11, 23, and 28 have been amended. The amendment to claims 1, 6, 11, 23, and 28 are for clarification, and are not to overcome prior art. For example, claim 1 recited "determining that the request specifies a function..., execution of which performs a task which is unrelated to retrieval of any document specified in the request". As amended, claim 1 now recites "..., execution of which performs a task which is unrelated to both generation and retrieval of any document specified in the request".

From the Savitzky reference, the Office suggests it would be obvious that "the script execution of generating the document is unrelated to the actual retrieval of the document" (*Office Action* p.3). Applicant respectfully disagrees that generating a document is unrelated to the retrieval of the document, as the Office suggests. However, in an effort to further prosecution and place the application in condition for allowance, claims 6, 11, 23, and 28 have been amended similarly to claim 1.

1           35 U.S.C. §103

2           Claims 1-15 and 22 are rejected under 35 U.S.C. §103(a) for obviousness  
3 over U.S. Patent No. 6,012,083 to Savitzky et al. (hereinafter, "Savitzky"), in view  
4 of U.S. Patent No. 5,956,483 to Grate et al. (hereinafter, "Grate") (*Office Action*  
5 p.2). It is noted that Microsoft is the owner of both the present application and  
6 Grate.

7           Although the Office does not indicate that claims 23-32 are also rejected  
8 under 35 U.S.C. §103(a) for obviousness over Savitzky in view of Grate, the  
9 format of the present Office Action suggests that this is the Office's basis for  
10 rejecting the claims. Accordingly, this response is based on the premise that  
11 claims 23-32 are rejected based on the Savitzky-Grate combination. Applicant  
12 requests that the Office indicate the basis for rejecting claims 23-32 if otherwise.

13  
14           Savitzky describes a third-party "agency" computing system that is  
15 interposed between one or more Web clients and one or more Web servers to  
16 interact with the clients and servers to transfer documents (col. 3, lines 32-37).  
17 The Web clients and Web servers communicate documents via the agency with  
18 HTTP (hypertext transfer protocol) over a communication channel, such as the  
19 Internet (col. 5, lines 6-12).

20           Savitzky refers to applets, stating that "client-side code execution is limited  
21 to documents in which a server has included applets and is limited to use with  
22 applet-aware browsers" (col. 2, lines 41-43). This is essentially described in the  
23 "Background" section of Applicant's Specification and is an example of the very  
24 prior art that Applicant sought to overcome. Applets, by their very nature, raise  
25 security issues for local computer systems. In general, computer programs can be

1 configured to cause harm to the local computer system. (*Specification* p.2, lines  
2 24-26). Applet viewers prevent harm from execution of an applet. For example,  
3 applets are prevented by an applet viewer from writing data to any persistent  
4 storage, thus protecting current contents of the persistent storage. (*Specification*  
5 p.3, lines 2-7). A disadvantage of the isolation of applets is that other computer  
6 processes executing concurrently with and independently of the applet viewer  
7 cannot communicate with the applets. (*Specification* p.3, line 28 - p.4, line 1).

8 Grate describes a method for embedding client-side function calls within  
9 HTML (hypertext markup language) content such that a user can initiate an  
10 embedded function call by clicking on a corresponding button or link while  
11 viewing a document with a standard Web browser (col. 3, lines 13-22). Web  
12 function calling protocols are embodied within client and server software  
13 components which provide for the exchange of information between Web users  
14 and online merchants over the Internet (col. 3, lines 37-42).

15 Contrary to Savitzky and Grate, Applicant claims receiving a request for a  
16 document from an applet, where the request specifies a function, the execution of  
17 which performs a task that is unrelated to both generation and retrieval of any  
18 document specified in the request (*see* claim 1, for example). Applicant describes  
19 an interprocess communication mechanism in which applets can receive and  
20 respond to processing requests of other computer processes, and which can send  
21 processing requests to such other computer processes without requiring  
22 modification of applet viewers. Additionally, computer system security is  
23 preserved with interprocess communication because an applet is denied direct  
24 access to computer system resources. (*Specification* p.5, lines 24-25).

1        **Claim 1** recites a method for serving remote procedure calls from an  
2        applet which executes within an applet viewer which in turn executes in a  
3        computer system that is serving said remote procedure calls, the method  
4        comprising:

5                receiving from the applet which executes in the same computer  
6                system that serves said remote procedure calls, a request for a document  
7                according to a document retrieval protocol implemented on a computer  
8                network;

9                determining that the request specifies a function which is defined  
10              within a computer process executing independently of the applet and applet  
11              viewer and which includes one or more computer instructions, execution of  
12              which performs a task which is unrelated to both generation and retrieval of  
13              any document specified in the request; and

14              executing the function in the same computer system that is executing  
15              said applet and applet viewer to thereby cause execution of the one or more  
16              computer instructions in response to receipt of the request.

17        Savitzky and/or Grate do not teach or suggest the combination of elements  
18        recited in claim 1. Both Savitzky and Grate describe client *and* server systems  
19        communicating information between the systems via the Internet. However,  
20        claim 1 recites “an applet which executes within an applet viewer which in turn  
21        executes in a computer system”, “the applet which executes in the same computer  
22        system”, and “executing the function in the same computer system that is  
23        executing said applet and applet viewer.” Neither Savitzky nor Grate teach or  
24        suggest the combination of elements recited in claim 1 in a “same computer  
25        system” environment.

26        Furthermore, Savitzky does not teach or suggest both a request for a  
27        document *and* “determining that the request specifies a function..., execution of  
28        which performs a task which is unrelated to both generation and retrieval of any  
29        document specified in the request”, as recited in claim 1.

1       The Office suggests that Savitzky at col. 1, line 63 through col. 2, line 43  
2 teaches the elements of claim 1 (*Office Action* pp.2-3). However, the cited section  
3 of Savitzky describes examples of server-client communications that teach away  
4 from Applicant's claim 1. For example, the Office cites that Savitzky describes a  
5 client sending a document request to a server for a document in the form of a URL  
6 that refers to a program on the server (*Savitzky* col. 2, lines 1-5). The Office  
7 disregards, however, that Savitzky continues the description with "[t]he server  
8 generates a document in accordance with the program and returns that document  
9 to the browser." (*Savitzky* col. 2, lines 5-7). This is expressly contrary to the  
10 execution of a function "which performs a task which is *unrelated* to both  
11 generation and retrieval of any document specified in the request", as recited in  
12 claim 1. To return a document to a client browser, the document request of  
13 Savitzky would be related to the retrieval of the document.

14       With regards to "applets", Savitzky describes that "[w]ith client-side code  
15 execution, the client requests a document and the returned document contains  
16 program code embedded in the document ..." which can be used for such tasks as  
17 animating graphic elements of a document (*Savitzky* col. 2, lines 25-31). This is  
18 also expressly contrary to "a request for a document" and "determining that the  
19 request specifies a function..., execution of which performs a task which is  
20 *unrelated* to both generation and retrieval of any document specified in the  
21 request", as positively recited in claim 1.

22       The Office states that it would be obvious that the applet generates the  
23 request since the request for a document is generated with client-side code  
24 execution and that "the script execution of generating the document is unrelated to  
25 the actual retrieval of the document" (*Office Action* p.3). Applicant respectfully

1 disagrees that generating a document is unrelated to the retrieval of the document,  
2 as the Office suggests. Savitzky clearly describes that “the server generates a  
3 document in accordance with the program and returns that document to the  
4 browser” (*Savitzky* col. 2, lines 5-7), and that with applets, the client requests a  
5 document and the returned document contains program code embedded in the  
6 document” (*Savitzky* col. 2, lines 25-27). Further, “client-side code execution is  
7 limited to documents in which a server has included applets” (*Savitzky* col. 2, lines  
8 25-27).

9 Grate also does not teach both a request for a document *and* “determining  
10 that the request specifies a function..., execution of which performs a task which  
11 is unrelated to both generation and retrieval of any document specified in the  
12 request”, as recited in claim 1. Grate says nothing about calling or requesting a  
13 function with a request for a document having an encoded remote procedure  
14 calling request, as claimed by the Applicant. To the contrary, Grate describes a  
15 simple, text-based format for embedding function calls within HTML documents  
16 (*Grate* col. 10, lines 45-47).

17 Accordingly, claim 1 is allowable over the Savitzky-Grate combination and  
18 Applicant respectfully requests that the §103 rejection be withdrawn.

19  
20 **Claims 2-5 and 22** are allowable by virtue of their dependency upon  
21 claim 1. Additionally, claims 3 and 4 are allowable over the Savitzky-Grate  
22 combination for independent reasons.

23 **Claims 3 and 4** recite “returning to the applet result data produced by  
24 execution of the function” (claim 3), and “forming a document which includes the  
25 data and sending the document to the applet” (claim 4).

1 The additional elements recited in claim 4 is that result data produced by  
2 execution of the function (of claim 1) is included into a document and the  
3 document is sent to the applet. Neither Savitzky nor Grate teaches “forming a  
4 document which includes the data”, and “sending the document to the applet”, as  
5 recited in claim 4.

6 The Office suggests that Savitzky at col. 2, lines 10-14, teaches forming a  
7 document which includes the data and sending the document to the applet in a  
8 “dynamic document of server side code execution” (*Office Action* p.4). Applicant  
9 respectfully disagrees that the document of Savitzky includes the results of a  
10 *function*, execution of which performs a task which is unrelated to both generation  
11 and retrieval of any document specified in the request, as recited in the  
12 combination of claims 1, 3, and 4. Accordingly, claims 3 and 4 are allowable over  
13 the Savitzky-Grate combination.

14  
15 **Claim 6** recites “receiving from the applet ... a request for a document”,  
16 and “determining that the request specifies a function which is defined within a  
17 computer process executing independently of the applet and applet viewer and  
18 which includes one or more selected computer instructions, execution of which  
19 performs a task which is unrelated to both generation and retrieval of any  
20 document specified in the request.”

21 As described above in the response to the rejection of claim 1, Savitzky  
22 and/or Grate do not teach or suggest both a request for a document *and*  
23 “determining that the request specifies a function which is defined within a  
24 computer process executing independently of the applet and applet viewer...,”  
25

1 execution of which performs a task which is unrelated to both generation and  
2 retrieval of any document specified in the request”, as recited in claim 6.

3 Accordingly, claim 6 is allowable over the Savitzky-Grate combination and  
4 Applicant respectfully requests that the §103 rejection be withdrawn.

5  
6 **Claims 7-10** are allowable by virtue of their dependency upon claim 6.  
7 Additionally, claims 8 and 9 are allowable over the Savitzky-Grate combination  
8 for independent reasons.

9 **Claims 8 and 9** recite “returning to the applet result data produced by  
10 execution of the function” (claim 8), and “forming a document which includes the  
11 result data and sending the document to the applet” (claim 9).

12 As described above in the response to the rejection of claims 3 and 4,  
13 neither Savitzky nor Grate teaches “forming a document which includes the result  
14 data”, and “sending the document to the applet”, as recited in claim 9. The  
15 document of Savitzky does not include the results *of a function*, execution of  
16 which performs a task which is unrelated to both generation and retrieval of any  
17 document specified in the request, as recited in the combination of claims 6, 8,  
18 and 9. Accordingly, claims 8 and 9 are allowable over the Savitzky-Grate  
19 combination.

20  
21 **Claim 11** recites “receiving from the applet ... a request for a document”  
22 and “determining that the request specifies a function which is defined within the  
23 computer process and which includes one or more computer instructions,  
24 execution of which performs a task which is unrelated to both generation and  
25 retrieval of any document specified in the request.”



1 As described above in the response to the rejection of claim 1, Savitzky  
2 and/or Grate do not teach or suggest both a request for a document *and*  
3 “determining that the request specifies a function which is defined within the  
4 computer process and which includes one or more computer instructions,  
5 execution of which performs a task which is unrelated to both generation and  
6 retrieval of any document specified in the request”, as recited in claim 11.

7 Accordingly, claim 11 is allowable over the Savitzky-Grate combination  
8 and Applicant respectfully requests that the §103 rejection be withdrawn.

9  
10 **Claims 12-15** are allowable by virtue of their dependency upon claim 11.  
11 Additionally, claims 13 and 14 are allowable over the Savitzky-Grate combination  
12 for independent reasons.

13 **Claims 13 and 14** recite “returning to the applet result data produced by  
14 execution of the function” (claim 13), and “forming a document which includes  
15 the result data and sending the document to the applet” (claim 14).

16 As described above in the response to the rejection of claims 3 and 4,  
17 neither Savitzky nor Grate teaches “forming a document which includes the result  
18 data”, and “sending the document to the applet”, as recited in claim 14. The  
19 document of Savitzky does not include the results *of a function*, execution of  
20 which performs a task which is unrelated to both generation and retrieval of any  
21 document specified in the request, as recited in the combination of claims 11, 13,  
22 and 14. Accordingly, claims 13 and 14 are allowable over the Savitzky-Grate  
23 combination.  
24  
25

1        **Claim 23** recites a method for serving remote procedure calls  
2        received from an instruction set that executes within a first computer  
3        process, the first computer process executing in a computing device that  
4        serves the remote procedure calls, the method comprising:

5                receiving a request for a data file from the instruction set, the request  
6                according to a data file retrieval protocol;

7                determining that the request for the data file specifies a function  
8                which is defined within a second computer process executing in the  
9                computing device independently of the instruction set and of the first  
10              computer process, the function including one or more computer  
11              instructions, execution of which performs a task which is unrelated to both  
12              generation and retrieval of any data file specified in the request; and

13              executing the function in the computing device to execute the one or  
14              more computer instructions in response to receipt of the request.

15              Savitzky and/or Grate do not teach or suggest the combination of elements  
16              recited in claim 23 in a single computing device environment. Both Savitzky and  
17              Grate describe client *and* server systems communicating information between the  
18              systems via the Internet. However, claim 23 describes first and second computer  
19              processes, and executing a function, in the same computing device.

20              Furthermore, neither Savitzky nor Grate teach or suggest both a request for  
21              a data file *and* “determining that the request for the data file specifies a  
22              function..., execution of which performs a task which is unrelated to both  
23              generation and retrieval of any data file specified in the request”, as recited in  
24              claim 23.

25              Similarly to the rejection of claim 1, the Office suggests that Savitzky  
teaches the elements of claim 23 (*Office Action* pp.5-6). As described above in the  
response to the rejection of claim 1, Savitzky describes examples of server-client  
communications that teach away from Applicant’s claim 23. For example,

1 Savitzky describes a client sending a document request to a server for a document  
2 in the form of a URL that refers to a program on the server and the server  
3 generates a document in accordance with the program and returns that document  
4 to the browser (*Savitzky* col. 2, lines 1-7). This is expressly contrary to the  
5 execution of a function “which performs a task which is *unrelated* to both  
6 generation and retrieval of any data file specified in the request”, as recited in  
7 claim 23.

8 The Office states that it would be obvious “the script execution of  
9 generating the document is unrelated to the actual retrieval of the document” in  
10 *Savitzky* (*Office Action* p.5). Applicant respectfully disagrees that generating a  
11 document is unrelated to the retrieval of the document, as the Office suggests.  
12 Savitzky clearly describes that “the server generates a document in accordance  
13 with the program and returns that document to the browser” (*Savitzky* col. 2, lines  
14 5-7), and that with applets, the client requests a document and the returned  
15 document contains program code embedded in the document” (*Savitzky* col. 2,  
16 lines 25-27). Further, “client-side code execution is limited to documents in which  
17 a server has included applets” (*Savitzky* col. 2, lines 25-27).

18 Accordingly, claim 23 is allowable over the Savitzky-Grate combination  
19 and Applicant respectfully requests that the §103 rejection be withdrawn.  
20

21 **Claims 24-27** are allowable by virtue of their dependency upon claim 23.  
22 Additionally, claim 26 is allowable over the Savitzky-Grate combination for  
23 independent reasons. Claim 26 recites that “returning the result data comprises  
24 generating a document which includes the result data, and sending the document  
25 to the first computer process.”

1 As described above in the response to the rejection of claim 4, neither  
2 Savitzky nor Grate teaches “generating a document which includes the result  
3 data”, and “sending the document to the first computer process”, as recited in  
4 claim 26. The document of Savitzky does not include the result data *of a function*,  
5 execution of which performs a task which is unrelated to both generation and  
6 retrieval of any data file specified in the request, as recited in the combination of  
7 claims 23 and 26. Accordingly, claim 26 is allowable over the Savitzky-Grate  
8 combination.

9  
10 **Claim 28** recites “receiving a request for a data file” and “determining that  
11 the request for the data file specifies a function..., execution of which performs a  
12 task which is unrelated to both generation and retrieval of any data file specified in  
13 the request”.

14 As described above in the response to the rejection of claim 23, Savitzky  
15 and/or Grate do not teach or suggest both a request for a data file *and*  
16 “determining that the request for the data file specifies a function..., execution of  
17 which performs a task which is unrelated to both generation and retrieval of any  
18 data file specified in the request”, as recited in claim 28.

19 Accordingly, claim 28 is allowable over the Savitzky-Grate combination  
20 and Applicant respectfully requests that the §103 rejection be withdrawn.

21  
22 **Claims 29-32** are allowable by virtue of their dependency upon claim 28.  
23 Additionally, claim 31 is allowable over the Savitzky-Grate combination for  
24 independent reasons. Claim 31 recites that “returning the result data comprises  
25

1 generating a document which includes the result data, and sending the document  
2 to the second computer process.”

3 As described above in the response to the rejection of claim 26, neither  
4 Savitzky nor Grate teaches “generating a document which includes the result  
5 data”, and “sending the document to the second computer process”, as recited in  
6 claim 31. The document of Savitzky does not include the result data *of a function*,  
7 execution of which performs a task which is unrelated to both generation and  
8 retrieval of any data file specified in the request, as recited in the combination of  
9 claims 28 and 31. Accordingly, claim 31 is allowable over the Savitzky-Grate  
10 combination.

11  
12 **Conclusion**

13 Pending claims 1-15 and 22-32 are in condition for allowance. Applicant  
14 respectfully requests reconsideration and issuance of the subject application. If  
15 any issues remain that preclude issuance of this application, the Examiner is urged  
16 to contact the undersigned attorney before issuing a subsequent Action.

17  
18 Respectfully Submitted,

19  
20 Dated: Aug 22, 2002

21 By: 

22 David A. Morasch  
23 Reg. No. 42,905  
24 (509) 324-9256 ext. 210  
25

Version of amended claims with markings to show changes made

1. (Twice Amended) A method for serving remote procedure calls from an applet which executes within an applet viewer which in turn executes in a computer system that is serving said remote procedure calls, the method comprising:

receiving from the applet which executes in the same computer system that serves said remote procedure calls, a request for a document according to a document retrieval protocol implemented on a computer network;

determining that the request specifies a function which is defined within a computer process executing independently of the applet and applet viewer and which includes one or more computer instructions, execution of which performs a task which is unrelated to both generation and retrieval of any document specified in the request; and

executing the function in the same computer system that is executing said applet and applet viewer to thereby cause execution of the one or more computer instructions in response to receipt of the request.

1           **6. (Twice Amended)** A computer readable medium useful in  
2 association with a computer system which includes a processor and a memory, the  
3 computer readable medium including computer instructions which are configured  
4 to cause the computer to serve remote procedure calls from an applet, which  
5 executes within an applet viewer which in turn executes in the computer system  
6 that is serving said remote procedure calls, by performing the steps of:

7           receiving from the applet which executes in the same computer system that  
8 serves said procedure calls, a request for a document according to a document  
9 retrieval protocol implemented on a computer network;

10           determining that the request specifies a function which is defined within a  
11 computer process executing independently of the applet and applet viewer and  
12 which includes one or more selected computer instructions, execution of which  
13 performs a task which is unrelated to both generation and retrieval of any  
14 document specified in the request; and

15           executing the function in the same computer system that is executing said  
16 applet and applet viewer to thereby cause execution of the one or more selected  
17 computer instructions in response to receipt of the request.

1           **11. (Three times Amended)** A computer system comprising:  
2           a processor;  
3           a memory operatively coupled to the processor; and  
4           a computer process which executes in the processor from the memory and  
5           which, when executed, serves remote procedure calls received from an applet  
6           which executes within an applet viewer which in turn executes in the processor  
7           from the memory concurrently and independently from the computer process,  
8           wherein the computer process serves the remote procedure calls by performing the  
9           steps of:  
10           receiving from the applet which executes in the same computer system that  
11           serves remote procedure calls, a request for a document according to a document  
12           retrieval protocol implemented on a computer network;  
13           determining that the request specifies a function which is defined within the  
14           computer process and which includes one or more computer instructions,  
15           execution of which performs a task which is unrelated to both generation and  
16           retrieval of any document specified in the request; and  
17           executing the function in the same computer system that is executing said  
18           applet and applet viewer to thereby cause execution of the one or more computer  
19           instructions in response to receipt of the request.



1           **23. (Amended)** A method for serving remote procedure calls received  
2 from an instruction set that executes within a first computer process, the first  
3 computer process executing in a computing device that serves the remote  
4 procedure calls, the method comprising:

5           receiving a request for a data file from the instruction set, the request  
6 according to a data file retrieval protocol;

7           determining that the request for the data file specifies a function which is  
8 defined within a second computer process executing in the computing device  
9 independently of the instruction set and of the first computer process, the function  
10 including one or more computer instructions, execution of which performs a task  
11 which is unrelated to both generation and retrieval of any data file specified in the  
12 request; and

13           executing the function in the computing device to execute the one or more  
14 computer instructions in response to receipt of the request.

1       **28. (Amended)** A computer system comprising:

2       a processor;

3       a memory operatively coupled to the processor; and

4       a first computer process configured to execute in the processor from the  
5       memory, the first computer process further configured to serve remote procedure  
6       calls received from an instruction set that executes within a second computer  
7       process, the second computer process configured to execute in the processor from  
8       the memory concurrently and independently of the first computer process, wherein  
9       the first computer process serves the remote procedure calls by:

10       receiving a request for a data file from the instruction set, the request  
11       according to a data file retrieval protocol;

12       determining that the request for the data file specifies a function which is  
13       defined within the first computer process, the function including one or more  
14       computer instructions, execution of which performs a task which is unrelated to  
15       both generation and retrieval of any data file specified in the request; and

16       executing the function in the computing device to execute the one or more  
17       computer instructions in response to receipt of the request.